

LOL-HECO-IR-3

Ref: “The Halawa-Iwilei, Halawa-School and the Makalapa-Airport-Iwilei 138kV transmission lines feeding the Downtown area 138kV substations do not have overcurrent protection schemes in place.” (HECO Application, page 19)

Question(s):

Why?

HECO Response:

As described on page 18 of the Application, three 138kV transmission lines provide power from the Halawa Substation (via the Halawa-Iwilei and the Halawa-School 138kV transmission lines), and from the Makalapa Substation (via the Makalapa-Airport-Iwilei 138kV transmission line), to two transmission substations (i.e., Iwilei, School) serving the Downtown area. If one of the three 138kV transmission lines to the Iwilei or School Substations is taken out of service for maintenance, and a second Downtown 138kV transmission line becomes unavailable, then the current flowing through the remaining Downtown 138kV transmission line is forecast to exceed the emergency current carrying capacity rating during daytime peak load conditions in the year 2023, assuming the Honolulu Power Plant (HPP) is on line. Therefore, line overload conditions are not expected to occur in the near-term and, as a result, HECO has not considered installing overcurrent protection schemes on the Halawa-Iwilei, Halawa-School and the Makalapa-Airport-Iwilei 138kV transmission lines.